



The Great Concert Sabotage

Grade 4 math · Place value, Addition, Multiplication, Rounding, Division · Reading level grades 3-4

Detective: _____ Date: _____

Just minutes before the biggest pop concert of the year, someone snuck backstage and stole the golden microphone! The venue was filled with fans, but the mystery thief vanished behind the curtain. Use your math skills to decode the clues, eliminate suspects, and track down the culprit before showtime!

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

My answer: the Stage Crasher is _____

Possible suspects

Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	VOCAL MOVE	STAGE EFFECT	MIC HAND	WIG COLOR	SOUND FRIGHT
Usher	Operatic Run	Confetti Blast	Left Handed	Neon Purple	Bass Boost Sound
Michael Jackson	Operatic Run	Strobe Flash	Left Handed	Neon Purple	Bass Boost Sound
Elton John	Beatbox Burst	Fog Cannon	Left Handed	Shiny Silver	Bass Boost Sound
Lady Gaga	Operatic Run	Fog Cannon	Left Handed	Shiny Silver	High Pitch Feedback
Dua Lipa	Beatbox Burst	Sparkler Rain	Left Handed	Neon Purple	High Pitch Feedback
Ariana Grande	Echo Belting	Fog Cannon	Right Handed	Neon Purple	Squeaky Drum Pedal
Taylor Swift	Beatbox Burst	Fog Cannon	Right Handed	Neon Purple	Squeaky Drum Pedal
Rihanna	Whistle High Note	Strobe Flash	Left Handed	Shiny Silver	Bass Boost Sound
The Weeknd	Beatbox Burst	Sparkler Rain	Right Handed	Shiny Silver	Bass Boost Sound
Olivia Rodrigo	Whistle High Note	Confetti Blast	Left Handed	Neon Purple	Squeaky Drum Pedal
Ed Sheeran	Rap Cannonball	Pink Lasers	Left Handed	Shiny Silver	Bass Boost Sound
Post Malone	Beatbox Burst	Strobe Flash	Right Handed	Flashy Gold	High Pitch Feedback
Justin Bieber	Operatic Run	Pink Lasers	Right Handed	Shiny Silver	Squeaky Drum Pedal
Selena Gomez	Beatbox Burst	Strobe Flash	Right Handed	Flashy Gold	Bass Boost Sound
Shawn Mendes	Beatbox Burst	Sparkler Rain	Right Handed	Neon Purple	Bass Boost Sound
Bruno Mars	Whistle High Note	Sparkler Rain	Left Handed	Shiny Silver	Bass Boost Sound
Katy Perry	Whistle High Note	Pink Lasers	Left Handed	Shiny Silver	Squeaky Drum Pedal
Beyoncé	Beatbox Burst	Sparkler Rain	Left Handed	Shiny Silver	Bass Boost Sound
Drake	Operatic Run	Confetti Blast	Left Handed	Shiny Silver	High Pitch Feedback
Adele	Operatic Run	Sparkler Rain	Right Handed	Flashy Gold	Squeaky Drum Pedal
Harry Styles	Whistle High Note	Pink Lasers	Right Handed	Shiny Silver	High Pitch Feedback

CLUE 1

The soundboard display is broken into place value digits. Decode the digits to reveal the first hidden note from backstage!

Solve each problem, then write its letter in every clue box that shows the same number.

800 3000 5000 300 20 90 90 4000 20 30 500 700 5000 9000 30 700 800

100 9000 5000 70 700 600 80 4000 30 30 700 30

What is the value of the 8 in 806? → **T**

What is the value of the 2 in 820? $\rightarrow$

What is the value of the 7 in 743? → **0**

What is the value of the 3 in 4,130? → **N**

What is the value of the 9 in 798? → **L**

What is the value of the 4 in 74,911? → **A**

What is the value of the 7 in 2,272? → **F**

What is the value of the 6 in 7,632? → **G**

What is the value of the 5 in 524? → **D**

What is the value of the 8 in 5,686? → **C**

What is the value of the 3 in 1,355? → **V**

What is the value of the 5 in 5,340? → **E**

What is the value of the 3 in 3,254? → **H**

What is the value of the 1 in 6,134? → **U**

What is the value of the 9 in 39,288? → **S**

Scratch space:

CLUE 2 Addition

The ticket booth needs you to add up all VIP passes sold to see which door the suspect squeezed through.

Solve each problem, then write its letter in every clue box that shows the same number.

T 8171	4223	5568	5405	3095	5405	9040	5568	T 8171	4223	5568	3774	3740	T 8171	4223	5568	
9430	5085	8963	5085	4340	T 8171	4223	5568	5085	9409	3774	5568	T 8171	4223	9769	4340	3740

$4738 + 3433 = \square \rightarrow \text{T}$	$1508 + 2266 = \square \rightarrow \text{L}$	$1709 + 3859 = \square \rightarrow \text{E}$
$4975 + 4455 = \square \rightarrow \text{M}$	$3348 + 2057 = \square \rightarrow \text{S}$	$1640 + 2700 = \square \rightarrow \text{N}$
$5385 + 3578 = \square \rightarrow \text{C}$	$2419 + 1321 = \square \rightarrow \text{D}$	$4374 + 5035 = \square \rightarrow \text{R}$
$1736 + 2487 = \square \rightarrow \text{H}$	$3086 + 4845 = \square \rightarrow \text{F}$	$5638 + 4131 = \square \rightarrow \text{A}$
$4847 + 4193 = \square \rightarrow \text{P}$	$2335 + 2750 = \square \rightarrow \text{I}$	$1689 + 1406 = \square \rightarrow \text{U}$

Scratch space:

CLUE 3

Multiplication facts (1-12)

The lighting crew arranged spotlight bulbs in equal rows. Multiply the rows to unlock the next secret paper.

Solve each problem, then write its letter in every clue box that shows the same number.

B				B															
15	14	35	35	15	7	7	35	20	35	7	42	63	24	35	120	14	24	9	
20	81	9	35	42	35	25	9	30	20	10	42	63							

$5 \times 3 = \square \rightarrow \text{B}$

$5 \times 5 = \square \rightarrow \text{P}$

$10 \times 3 = \square \rightarrow \text{C}$

$3 \times 8 = \square \rightarrow \text{D}$

$10 \times 1 = \square \rightarrow \text{R}$

$9 \times 9 = \square \rightarrow \text{H}$

$7 \times 2 = \square \rightarrow \text{A}$

$6 \times 7 = \square \rightarrow \text{U}$

$1 \times 9 = \square \rightarrow \text{E}$

$1 \times 7 = \square \rightarrow \text{O}$

$7 \times 9 = \square \rightarrow \text{N}$

$4 \times 5 = \square \rightarrow \text{T}$

$5 \times 7 = \square \rightarrow \text{S}$

$12 \times 10 = \square \rightarrow \text{M}$

Scratch space:

CLUE 4 Rounding

The backstage crowd meter only displays rounded numbers. Round the fan totals to unlock the camera logs.

Solve each problem, then write its letter in every clue box that shows the same number.

A															
1700	290	500	2300	1100	20	290	2300	430	300	200	30	2000	2300	90	
			A				A								
290	1300	30	1700	1100	700	2000	1700	290	700	30	5000	4300	4300	200	700
		A													
1100	200	1700	30	130	20										

Round 1,652 to the nearest hundred → **A**

Round 17 to the nearest ten → **Y**

Round 153 to the nearest hundred → **E**

Round 496 to the nearest hundred → **H**

Round 291 to the nearest hundred → **V**

Round 1,146 to the nearest hundred → **N**

Round 4,323 to the nearest hundred → **P**

Round 4,808 to the nearest thousand → **O**

Round 129 to the nearest ten → **B**

Round 1,328 to the nearest hundred → **T**

Round 428 to the nearest ten → **L**

Round 2,070 to the nearest thousand → **W**

Round 745 to the nearest hundred → **D**

Round 87 to the nearest ten → **G**

Round 34 to the nearest ten → **R**

Round 2,348 to the nearest hundred → **I**

Round 286 to the nearest ten → **S**

Scratch space:

CLUE 5**Division facts (1-12) - the last clue**

The stage crew has to divide the backup cables into equal bins to search the final dressing room.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

Step 1 - solve these:

$14 \div 7 = \boxed{}$

$6 \div 6 = \boxed{}$

$72 \div 8 = \boxed{}$

$144 \div 12 = \boxed{}$

$10 \div 1 = \boxed{}$

$56 \div 8 = \boxed{}$

$32 \div 8 = \boxed{}$

$40 \div 8 = \boxed{}$

$24 \div 3 = \boxed{}$

$36 \div 12 = \boxed{}$

$66 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain blasted a whistle high note, then triggered sparkler rain.
2. The villain fired off a beatbox burst, then triggered sparkler rain.
3. The villain sang an echo belting line, then triggered sparkler rain.
4. The villain blasted a whistle high note, then lit up pink lasers.
5. The villain sang an echo belting line, then fired a fog cannon.
6. The villain dropped a rap cannonball verse, then lit up pink lasers.
7. The villain blasted a whistle high note, then fired a fog cannon.
8. The villain finished an operatic run, then lit up pink lasers.
9. The villain blasted a whistle high note, then switched on a strobe flash.
10. The villain finished an operatic run, then launched a confetti blast.
11. The villain fired off a beatbox burst, then fired a fog cannon.
12. The villain fired off a beatbox burst, then switched on a strobe flash.

Answer Key

The Great Concert Sabotage

Culprit: Ed Sheeran

Rap Cannonball · Pink Lasers · Left Handed · Shiny Silver · Bass Boost Sound

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE FOG CANNON"

What is the value of the 8 in 806? = 800 (T) · What is the value of the 2 in 820? = 20 (I) · What is the value of the 7 in 743? = 700 (O) · What is the value of the 3 in 4,130? = 30 (N) · What is the value of the 9 in 798? = 90 (L) · What is the value of the 4 in 74,911? = 4000 (A) · What is the value of the 7 in 2,272? = 70 (F) · What is the value of the 6 in 7,632? = 600 (G) · What is the value of the 5 in 524? = 500 (D) · What is the value of the 8 in 5,686? = 80 (C) · What is the value of the 3 in 1,355? = 300 (V) · What is the value of the 5 in 5,340? = 5000 (E) · What is the value of the 3 in 3,254? = 3000 (H) · What is the value of the 1 in 6,134? = 100 (U) · What is the value of the 9 in 39,288? = 9000 (S)

Clue 2 (Addition): "THE SUSPECT HELD THE MIC IN THEIR LEFT HAND"

$4738 + 3433 = 8171$ (T) · $1508 + 2266 = 3774$ (L) · $1709 + 3859 = 5568$ (E) · $4975 + 4455 = 9430$ (M) · $3348 + 2057 = 5405$ (S) · $1640 + 2700 = 4340$ (N) · $5385 + 3578 = 8963$ (C) · $2419 + 1321 = 3740$ (D) · $4374 + 5035 = 9409$ (R) · $1736 + 2487 = 4223$ (H) · $3086 + 4845 = 7931$ (F) · $5638 + 4131 = 9769$ (A) · $4847 + 4193 = 9040$ (P) · $2335 + 2750 = 5085$ (I) · $1689 + 1406 = 3095$ (U)

Clue 3 (Multiplication facts (1-12)): "BASS BOOST SOUNDS MADE THE SUSPECT RUN"

$5 \times 3 = 15$ (B) · $5 \times 5 = 25$ (P) · $10 \times 3 = 30$ (C) · $3 \times 8 = 24$ (D) · $10 \times 1 = 10$ (R) · $9 \times 9 = 81$ (H) · $7 \times 2 = 14$ (A) · $6 \times 7 = 42$ (U) · $1 \times 9 = 9$ (E) · $1 \times 7 = 7$ (O) · $7 \times 9 = 63$ (N) · $4 \times 5 = 20$ (T) · $5 \times 7 = 35$ (S) · $12 \times 10 = 120$ (M)

Clue 4 (Rounding): "A SHINY SILVER WIG STRAND WAS DROPPED NEARBY"

Round 1,652 to the nearest hundred = 1700 (A) · Round 17 to the nearest ten = 20 (Y) · Round 153 to the nearest hundred = 200 (E) · Round 496 to the nearest hundred = 500 (H) · Round 291 to the nearest hundred = 300 (V) · Round 1,146 to the nearest hundred = 1100 (N) · Round 4,323 to the nearest hundred = 4300 (P) · Round 4,808 to the nearest thousand = 5000 (O) · Round 129 to the nearest ten = 130 (B) · Round 1,328 to the nearest hundred = 1300 (T) · Round 428 to the nearest ten = 430 (L) · Round 2,070 to the nearest thousand = 2000 (W) · Round 745 to the nearest hundred = 700 (D) · Round 87 to the nearest ten = 90 (G) · Round 34 to the nearest ten = 30 (R) · Round 2,348 to the nearest hundred = 2300 (I) · Round 286 to the nearest ten = 290 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Ed Sheeran

$14 \div 7 = 2$ · $6 \div 6 = 1$ · $72 \div 8 = 9$ · $144 \div 12 = 12$ · $10 \div 1 = 10$ · $56 \div 8 = 7$ · $32 \div 8 = 4$ · $40 \div 8 = 5$ · $24 \div 3 = 8$ · $36 \div 12 = 3$ · $66 \div 6 = 11$